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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,120	11/14/2001	Ronald Hilton	AMDH-08157US0 DEL	4631

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EXAMINER

SAXENA, AKASH

ART UNIT	PAPER NUMBER
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2128

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,120

Applicant(s)

HILTON, RONALD

Examiner

Akash Saxena

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-6 have been presented for examination based on the application filed on 14th November 2001.

Claim Interpretation

2. Claim 1: State information is used for determining a "program mode of operation". By applicant's own admission (Specification: Pg.6-7, [0027]) the features and modes are defined by the program execution information. Further, in S/390 architecture, program information is stored in Program status word (PSW) & control registers. Hence, examiner interprets that state information is stored in PSW & control registers as well. Further, state information is interpreted as a flag indicating if the code is ready for execution (i.e. is it already translated).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claims 1-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

The Examiner submits that method claim 1, as written, is merely drawn to a mental process for dynamic translation & emulation. Since the language of the claims can be interpreted as a method that is being carried out by a mental process augmented by using pencil and paper it is non statutory. MPEP 2111 states:

In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969) (Claim 9 was directed to a process of analyzing data generated by mass spectrographic analysis of a gas. The process comprised selecting the data to be analyzed by subjecting the data to a mathematical

Art Unit: 2128

manipulation. The examiner made rejections under 35 U.S.C. 101 and 102. In the 35 U.S.C. 102 rejection, the examiner explained that the claim was anticipated by a mental process augmented by pencil and paper markings. The court agreed that the claim was not limited to using a machine to carry out the process since the claim did not explicitly set forth the machine. The court explained that "reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from reading limitations of the specification into a claim,' to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim." The court found that applicant was advocating the latter, i.e., the impermissible importation of subject matter from the specification into the claim.)

Examiner respectfully suggests that the above-mentioned rejection can be overcome by updating the preamble with phrase like "A computer implemented method for dynamic emulation...". Further, a final step of execution of emulation will make the result tangible. Claims 2-5 are rejected on basis of their dependency on claim 1.

To expedite a complete examination of the instant application the claims rejected under 35 U.S.C. § 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-2, 4 & 6 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6516295 issued to George A. Mann et al (Mann '295 hereafter).**

Regarding Claim 1

Mann '295 teaches a method for dynamic emulation of a legacy instruction of a legacy program (Mann '295: Col.2 Lines 44-51). **Mann '295** teaches state information is store in form of a tag (Mann '295: Col.5 Table 1). Further, **Mann '295** teaches that the legacy instruction and the state information are accessed for each particular legacy instruction (Mann '295: Col. 6 Lines 11-19). Further, **Mann '295** teaches querying if the one or more legacy instructions stored as a result of translation for an execution mode (Mann '295: Col.5 Table 1; Col.5 Lines 54-67; Col.6 Lines 1-12, 21-28). **Mann '295** also teaches if the code is not translated (and used) then it is translate into one or more instructions and stored in blocks (including tag/state, offset/index execution status information) (Mann '295: Fig.3; Col.8 Lines 33-49) and then the block goes through dynamic emulation execution.

Regarding Claim 2

Mann '295 teaches the step of storing translation indications for only a subset of all translated blocks (Mann '295: Col.5 Lines 54-63). Further, Mann '295 teaches that the state information/tag is stored in particular translated blocks (Mann '295: Fig.3 Elements 70, 80, 85 & 88).

Regarding Claim 4

Mann '295 teaches that legacy instructions are object code instructions compiled/assembled for the legacy architecture (Mann '295: Col.2 Lines 44-51).

Regarding Claim 6

Claim 6 discloses the same limitations as claim 1 and is rejected for the same reasons as claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 3 & 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,516,295 issued to George A. Mann et al (Mann '295 hereafter) in view of U.S. Patent No. 5,560,013 issued to Casper A. Scalzi et al (Scalzi '013 hereafter).

Regarding Claim 3

Teachings of Mann '295 are disclosed in the claim 1 rejection above.

Mann '295 does not teach legacy instructions are for a legacy system having S/390 Architecture.

Scalzi '013 teaches that legacy instructions are for a legacy system having S/390 Architecture (Scalzi '013: Col.17 Lines 54-57).

It would have been obvious to one (e.g. a designer) of ordinary skill in the art at the time the invention was made to combine the teachings of Scalzi '013 and apply them to Mann '295 to emulate execution of legacy instruction for S/390 legacy architecture. The motivation would have been that Scalzi '013 and Mann '295 are analogous art. Further, Scalzi '013 is performing the instruction set translation in a very similar fashion as Mann '295 through mapping/dynamic address translation (Scalzi '013: Col. 5 Lines 17-23).

Regarding Claim 5

Scalzi '013 teaches that legacy instructions are for a legacy system having S/390 Architecture (which is a CISC architecture) and host architecture is power PC (which is a RISC based architecture) (Scalzi '013: Col.17 Lines 54-57).

Conclusion

6. All claims are rejected.

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

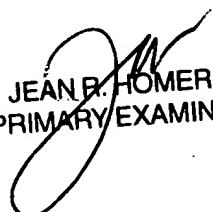
In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akash Saxena whose telephone number is (571) 272-8351. The examiner can normally be reached on 8:30 - 5:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean R. Homere can be reached on (571)272-3780. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Friday, July 8, 2005


JEAN R. HOMERE
PRIMARY EXAMINER